UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte BENOIT MAISON and GEOFFREY GERSON ZWEIG

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Appeal 2009-004060
Application 10/637,219
Technology Center 2600

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Decided: March 25, 2010

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Before, ROBERT E. NAPPI, MARC S. HOFF, and
ELENI MANTIS MERCADER, *Administrative Patent Judges.*

NAPPI, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the final rejection of claims 1-16 and 21-24.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part the Examiner's rejection of these claims.

INVENTION

The invention is directed to "a method, apparatus, and program for task-specific code generation for speech recognition decoding." Spec: 1. Claim 1 is representative of the invention and reproduced below:

> 1. A method, implemented in a data processing system, for generating task-specific code for pattern recognition, the method comprising:
> receiving task-specific input system data of a pattern recognition system; and
> generating task-specific code for the pattern recognition system based on the task-specific input system data, wherein the task-specific code includes computer language suitable for compilation.

REFERENCES

Lanning	US 5,787,285	Jul. 28, 1998
Poirier	US 6,321,372 B1	Nov. 20, 2001
Arnold	US 2003/0125955 A1	Jul. 3, 2003 (filed Dec. 28, 2001)

"Determining the Probability of Words in a String With a Word-Skipping Model," IBM Technical Disclosure Bulletin, November 1985 (hereinafter referred to as "IBM").

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[1] Claims 17-20 were cancelled in an Amendment filed, May 14, 2007.

REJECTION AT ISSUE

Claims 1-4, 6-7, 11-14, and 21-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier. Ans. 4-7.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier and IBM. Ans. 7-8.

Claims 8-10, 15-16, and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier and Lanning. Ans. 8-10.

ISSUES

Rejection of claims 1-4, 6-7, 11-14, and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier

Appellants argue on pages 10-15 of the Appeal Brief and 2-5 of the Reply Brief that the Examiner's rejection of claims 1-4, 6-7, 11-14, and 21-23 is in error. Appellants select claim 1 as representative of the group comprising claims 1-4, 6-7, 11-14, and 21-23. App. Br. 10. Appellants argue that neither of the references discloses "generating task-specific code for the pattern recognition system based on the task-specific input system data, wherein the task-specific code includes computer language suitable for compilation." App. Br. 11. Additionally, Appellants argue that the Examiner erred in combining Arnold with Poirier. App. Br. 14.

Thus, Appellants' contentions with respect to claims 1-4, 6-7, 11-14, and 21-23 present us with two issues. (1) Did the Examiner err in finding that Arnold in view of Poirier discloses generating task-specific code for the pattern recognition system based on the task-specific input system data, wherein the task-specific code includes computer language suitable for compilation? (2) Did the Examiner err in finding it obvious to combine Arnold with Poirier?

*Rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over
Arnold in view of Poirier and IBM*

Appellants argue on pages 15-16 of the Appeal Brief and pages 2-4 of
the Reply Brief that the Examiner's rejection of claim 5 is in error.
Appellants argue that this claim is allowable based upon its dependency on
independent claim 1. App. Br. 15. Thus, Appellants' arguments with
respect to claim 5 present us with the same issues as claim 1.

*Rejection of claims 8-10, 15-16, and 24 under 35 U.S.C. § 103(a) as being
unpatentable over Arnold in view of Poirier and Lanning*

Appellants argue on pages 16-18 of the Appeal Brief and pages 4-7 of
the Reply Brief that the Examiner's rejection of claims 8-10, 15-16, and 24
is in error. Appellants select claim 8 as representative of the group
comprising claims 8-10, 15-16, and 24.[2] App. Br. 16. Appellants argue that
none of the references discloses "profiling the decoder program to form a
profile" and "determining whether the decoder program is optimized." App.
Br. 16; Reply Br. 5.

Thus, Appellants' contentions with respect to claims 8-10, 15-16, and
24 present us with the issue: did the Examiner err in finding that Arnold in

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[2] We note that claim 10 is not commensurate in scope with claim 8.
Therefore, we do not group claim 10 with claim 8. Since no other
arguments have been directed to the Examiner's rejection of claim 10, we
affirm the Examiner's rejection.

view of Poirier and Lanning discloses profiling the decoder program to form a profile and determining whether the decoder program is optimized?[3]

<div align="center">FINDINGS OF FACT (FF)</div>

<div align="center">*Arnold*</div>

1. Arnold discloses a speech recognition system that contains a central server and at least one client device that contains an initial language model. ¶ [0008].

2. The client devices have limited processing power. As a result, the system provides the client devices with just enough information and data to perform a requested task. As such, the system employs "dynamic grammars" that provide updates of models to the client devices based upon the current needs. ¶ [0020].

3. The central server contains a grammar manager, a dialog manager, and a response synthesis manager that assist the client devices with processing. ¶ [0021].

4. The grammar manager updates language models on the client device in response to the requests of a user. ¶ [0021].

5. The dialog manager deciphers, processes, and anticipates requests made by a user. In addition, the dialog manager keeps track of the user's dialogue and determines what grammar and language updates

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[3] Appellants make an additional argument regarding claims 8-10, 15-16, and 24. Reply Br. 4-5. We do not reach this additional issue since whether Arnold in view of Poirier and Lanning discloses profiling the decoder program to form a profile and determining whether the decoder program is optimized is dispositive of the case.

<div align="center">5</div>

are required at a particular dialogue state. ¶ [0021] and ¶ [0046]-[0047].

6. The response synthesis manager provides the responses necessary to interact with the user. ¶ [0021].

Poirier

7. Poirier discloses creating a service executable for a new linguistic service produced from a new source code created using old source code. Col. 2, ll. 26-36 and Col. 9, ll. 47-52.

8. In order to create the service executable, the source code must be compiled. Col. 10, ll. 52-57.

Lanning

9. Lanning discloses an optimization system that tunes code by arranging highly-used routines in a manner that allows a computer program to perform a task more quickly. Col. 1, ll. 25-31.

10. The system monitors the execution of a piece of software and collects information on the paths of execution using a profiler. The information gathered is then used to recompile the source code to make the computer more efficient. Col. 1, ll. 41-50.

PRINCIPLES OF LAW

Office personnel must rely on Appellants' disclosure to properly determine the meaning of the terms used in the claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc). "[I]nterpreting what is *meant* by a word *in* a claim is not to be confused with

adding an extraneous limitation appearing in the specification, which is improper." *In re Cruciferous Sprout Litigation,* 301 F.3d 1343, 1348 (Fed. Cir. 2002) (internal quotation marks and citations omitted; emphasis in original).

On the issue of obviousness, the Supreme Court has stated that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.,* 550 U.S. 398, 416 (2007).

ANALYSIS

Rejection of claims 1-4, 6-7, 11-14, and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier

Appellants' arguments have not persuaded us of error in the Examiner's rejection of claim 1. Claim 1 recites "generating task-specific code for the pattern recognition system based on the task-specific input system data, wherein the task-specific code includes computer language suitable for compilation." Appellants argue that the combination of Arnold and Poirier do not teach this limitation because Arnold specifically teaches away from heavy processing. App. Br. 13; Reply Br. 3. We disagree.

Arnold discloses a speech recognition system that contains client devices and a central server. FF 1. Since the processing power of the client devices is small, Arnold discloses a system where the client devices are provided with just enough information and data to perform the requested task. FF 2. The central server assists the client devices with any "heavy" processing requirements. FF 3. Therefore, Arnold does not teach away

7

from heavy processing, but merely discloses handling any heavy processing using the central server.

Appellants additionally argue that the combination of Arnold with Pothier is in error because Arnold teaches away from generating code since Arnold discloses "ready to use models." App. Br. 13-14; Reply Br. 2-4. Appellants argue that applying Poirier's teaching of modifying and compiling source code to Arnold's models would defeat the purpose of having "ready to use models." App. Br. 14; Reply Br. 4.

We disagree that Arnold's models are only "ready to use models." While Arnold discloses initial grammar and language models to be used by the system, Arnold recognizes the need to modify these models based upon what the user is requesting. FF 1, 2. As such, Arnold's models are "dynamic" and constantly updated and modified. FF 2. Arnold contains a dialog manager that is tasked with this specific purpose. FF 5. Therefore, as the user speaks requests, the dialog manager deciphers, processes, and anticipates the requests of the user and passes the appropriate models, resources, and language and grammar updates to the client device. FF 5. As a result, specific tasks are performed based upon a user's input to the system and processes are carried out by the dialog manager in order to accomplish the user's request. Thus, Arnold does not "teach away" from generating code because Arnold's models are dynamic and dependent upon a user's request.

Finally, Appellants argue that the Examiner erred in concluding that it was obvious to combine Arnold with Poirier. App. Br. 14; Reply Br. 4. We disagree. As noted above, Arnold does not teach away from the combination with Poirier. Poirier discloses modifying preexisting source

8

code for producing a modified source code in order to respond to new linguistic service requests. FF 7. In order to obtain an executable file, the modified source code is compiled. FF 8. Arnold discloses modifying, i.e., updating, language and grammar models in order to satisfy a user's request. FF 2. Substituting Poirier's teaching of compiling modified source code with Arnold's updated language and grammar models yields the predictable result of creating usable program code. Therefore, it would have been obvious to combine Arnold with Poirier and Appellants' arguments are not found to be persuasive.

As such, for the reasons stated above, we sustain the Examiner's rejection of claim 1 and claims 2-4, 6-7, 11-14, and 21-23 that are grouped with claim 1.

Rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier and IBM

Appellants' arguments have not persuaded us of error in the Examiner's rejection of claim 5. Appellants arguments present the same issues as discussed *supra* with respect to claim 1. App. Br. 15-16; Reply Br. 2-4. Therefore, we sustain the Examiner's rejection of claim 5 for the reasons discussed *supra* with respect to claim 1.

Rejection of claims 8-10, 15-16, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Arnold in view of Poirier and Lanning

Appellants' arguments have persuaded us of error in the Examiner's rejection of claim 8. Claim 8 recites "profiling the decoder program to form a profile; and determining whether the decoder program is optimized." Appellants argue that Lanning does not disclose determining whether a

9

decoder program is optimized before beginning the optimization process.
App. Br. 18; Reply Br. 6. We agree.

Lanning discloses a system that optimizes or tunes code by placing
highly-used routines close together so that the time it takes a computer
program to perform a task is reduced. FF 9. In order to do this, the system
uses a profiler to monitor the execution of a piece of software and gathers
information on the paths of execution. FF 10. Then, this information is used
to recompile the source code to become more efficient. FF 10. There is
nothing in Lanning that discloses determining whether the source code is
optimized before conducting the optimization routine. Therefore, we will
not sustain the Examiner's rejection of claim 8 and claims 9, 15-16, and 24
that are grouped with claim 8.

CONCLUSION

The Examiner did not err in finding that Arnold in view of Poirier
discloses generating task-specific code for the pattern recognition system
based on the task-specific input system data, wherein the task-specific code
includes computer language suitable for compilation.

The Examiner did not err in finding it obvious to combine Arnold
with Poirier.

The Examiner erred in finding that Arnold in view of Poirier and
Lanning discloses profiling the decoder program to form a profile and
determining whether the decoder program is optimized.

SUMMARY

The Examiner's decision to reject claims 1-4, 6, and 13-22 is affirmed. The Examiner's decision to reject claims 8-9, 15-16, and 24 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136 (a)(1)(iv).

<u>AFFIRMED-IN-PART</u>

ELD

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